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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Gary Cao

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07/29/2009

INTEL CORPORATION

c/o CPA Global

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EXAMINER

RAO, SHRINIVAS H

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/752,359	CAO ET AL.	
	Examiner	Art Unit	
	STEVEN H. RAO	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/04/09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicants' amendment filed on 05/04/ 09 has been entered and forwarded to the Examiner on 06/01/09 .

Therefore claim 1 as amended by the amendment and claims 2-11 as previously recited are currently pending in the Application.

Claims 12 to 16 have been cancelled.

Information Disclosure Statement

To date no IDS has been filed in this case.

Claim Objections

1. Claims 1- 11 are objected to because of the following informalities:
2. Claim 1 recites " unambiguous and correct identification" .
3. It is not known what Applicants' mean by " correct identification".
4. Dependent claims 2-11 are rejected for depending upon objected claim1
5. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21 (2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being unpatentable over Satya et al.

(U.S. Patent No. 6,528,818, herein after Satya).

With respect to claim 1 Satya describes a cluster of four copies of a test structure disposed at an intersection of four separate die wherein each copy of said test structure is replicated by photography in one of said four separate die and wherein said test structure comprises:

a first set of features, (Satya abstract line 2-4, Satya col. 37 lines 28 to 30 layers figs. 6 to 13)) said first set of features being representative of product to be monitored in a chip in said one of four separate die (fig. 15 A) .

It is noted that the recitation "said first set of features being representative of product to be monitored in a chip in said one of four separate die" cannot be given patentable weight because it is narrative in form . In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specific function, as set forth in 35 USC Section 112, 6th paragraph and must be supported by recitation in the claims of sufficient structure to warrant the presence of functional language.

In re Fuller , 1929 C.D. 172, 388 O.G. 279.

It is further noted that duplication of parts (i.e. one die or one of four separate die) amounts to mere duplication of the essential working parts of a device that involves only routine skill in the art.

St. Regis Paper Co. v Bemis co., 193 USPQ 8.

a second set of features adjacent to said first set of features, said second set of features being similar to said first set of features, but differing from said first set of features in one or more ways such that pattern recognition results in an unambiguous and correct identification of said one of four separate die . (Satya paras 161,164, 175 etc., plus inherent in every mirror image, figure 27, etc and Satya abstract lines 6-8, Satya col. 37 lines 28 to 30, similar to applicants' " pattern factor" defined in Applicants' specification as page 9 lines 1-2 see also Applicants' specification page 8 lines 19-end, etc.).

It is noted that the recitation "said second set of features being similar to said first set of features , but differing from said first set of features in one or more ways such that pattern recognition results in an unambiguous and correct identification of said one of said four separate die In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specific function, as set forth in 35 USC Section 112, 6th paragraph and must be supported by recitation in the claims of sufficient structure to warrant the presence of functional language.

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In re Fuller , 1929 C.D. 172, 388 O.G. 279.

It is further noted that duplication of parts (i.e. one die or one of four separate die) amounts to mere duplication of the essential working parts of a device that involves only routine skill in the art.

St. Regis Paper Co. v Bemis co., 193 USPQ 8

With respect to claim 2 Satya describes the structure of claim 1 wherein critical dimension (CD) is measured on said first set of features. (Stay figure 2, col. 8 lines 15-22).

With respect to claim 3 Satya describes the structure of claim 1 wherein said first set of features and said second set of features differ in spaces between features. (Staya figure 4D # 216 and 214)

With respect to claim 4 describes the structure of claim 1 ,wherein said first set of features and said second set of features differ in line widths of features. (Staya figure 4 D).

With respect to claim 5 describes the structure of claim 1 wherein said first set of features and said second set of features have the same pitch for features. (Satya figure 4C).

Claim Rejections - 35 USC Section 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

B. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satya et al. (U.S. Patent No. 6,528,818, herein after Satya), as applied to claims 1-5 above and further in view of Gallarada et al (U.S. Patent No. 6,539,106 herein after Gallarada).

With respect to claim 6 Satya describes the structure of claim 1.

However Staya, does not describe wherein said first set of features comprises a first array of holes.

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However, Gallarada in figure 4, col. 6 lines 36 to 48 describes wherein said first set of features comprises a first array of holes to identify defects of electrical significance, such as missing or incompletely formed contact holes and provide methods for inspection by matching of features between the images.

Therefore, it would have been obvious to one of ordinary skill in the art at the time for the invention to include Gallarada's teachings Of first set of features comprises a first array of holes, in Satya's first/second set of features.

The motivation to make the above substitution is to identify defects of electrical significance, such as missing or incompletely formed contact holes and provide methods for inspection by matching of features between the images. (Gallarada col. 6 lines 40-47).

With respect to claim 7 describes the structure of claim 6 wherein said first array of holes comprises a 5 by-5 square array of holes. (Gallarda figure 5).

With respect to claim 8 describes the structure of claim 6 wherein said second set of features comprises a second array of holes. (Gallarda figure 5).

With respect to claim 9 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in size of array. (Gallarda figure 5 # 536 compared with other structures 526-534).

With respect to claim 10 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in space between holes. (Gallarda figures 18 A and E)

With respect to claim 11 describes the structure of claim 8 wherein said second array of holes differs from said first array of holes in line widths of holes.. (Satya figure 4D).

Response to Arguments

Applicant's arguments filed October 05/04/09 have been fully considered but they are not persuasive for the following reasons :

Applicants' first contention that allegedly Satya does not disclose " a cluster of four copies of test structure wherein each copy is from a separate die and wherein each copy includes " is not persuasive because presently the elements are ONLY recited in the preamble for which patentable weight cannot be given.

"1. (Currently Amended) A cluster of four copies of a test structure disposed at an intersection of a four separate die wherein each copy of said test structure is replicated

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by photolithography in one of said four separate die and wherein said test structure comprising comprises: “

Current case law states “ The recitation that “A cluster of four copies of a test structure disposed at an intersection of a four separate die wherein each copy of said test structure is replicated by photolithography in one of said four separate die and wherein said test structure comprising comprises” has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to structure and the portion of the claim following the preamble is a self contained description of the structure not depending for completeness upon the introductory clause.

Korpa v Robie, 88 USPQ 478 (CCPA 1951).

Applicants’ contention that that allegedly Satya does not disclose “ a first set of features to monitor product and a second set of features to identify the separate die “ is not persuasive because current case further states

In response to Applicants’ arguments that the functional recitation “a first set of features to monitor product and a second set of features to identify the separate die” should be given patentable weight “

It cannot be given patentable weight because it is narrative in form . In order to be given patentable weight, a functional recitation must be expressed as a “manes” for performing the specific function, as set forth in 35 USc Section 112, 6th paragraph and must be supported by recitation in the claims of sufficient structure to warrant the presence of functional language.

In re Fuller , 1929 C.D. 172, 388 O.G. 279.

Therefore Satya teaches each and every element for which patentable weight can be given.

Dependent Claims 2-5 were alleged to be allowable because of their dependency upon allegedly allowable claim 1 , However as seen above claim 1 is not allowable.

Therefore dependent claims 2-5 are also not allowable.

With respect to claims dependent claims 6 to 11 Applicants’ repeat their arguments w.r.t to claim1 above which was not persuasive for reasons set out above and incorporated here by reference for the sake of brevity.

Therefore all pending claims 1-11 are finally rejected.

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1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN H. RAO whose telephone number is (571)272-1718. The examiner can normally be reached on 8.30-5.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1714. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Howard Weiss/
Primary Examiner, Art Unit 2814

/Steven H Rao/
Examiner, Art Unit 2814